

①

- a) Molecule - two or more atoms ~~are~~ linked together by a chemical bond.
- b) Relative humidity - The amount of water vapor in a given volume of air at a given ~~temperate~~ temperature.
- c) Barometer - An ~~ints~~ instrument used ~~to~~ to measure the humidity in the air.
- 1/2 d) Jet streams - bands of air that move from east to west.
- e) Solvent - a substance that dissolves other ~~substances~~ substances called ~~solutes~~ a solute.
- f) Cohesion - water's ability ~~to~~ to stick to another substance.

②

For metric ~~was~~ you would want to use Liters. For English you would want to use gallons.

③

There are 120 centimeters in 12 meters.

④

75 grams is the same as 0.075 kilograms.

⑤
Old

$$\frac{0.5\cancel{\text{L}}}{1} \times \frac{1\text{gal}}{3.78\cancel{\text{L}}} = \frac{0.5\text{gal}}{3.78}$$

$$3.78 \overline{) 0.50} =$$

$$\begin{array}{r} 132272486 \\ 378 \overline{) 50.00000000} \\ \underline{-378} \\ 1220 \\ \underline{-1134} \\ 860 \\ \underline{-756} \\ 1040 \\ \underline{-756} \\ 2840 \\ \underline{-2746} \\ 94 \end{array}$$

$$\begin{array}{r} 378 \overline{) 1890} \\ \underline{-1512} \\ 3780 \\ \underline{-3024} \\ 7560 \\ \underline{-7560} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 1134} \\ \underline{-756} \\ 3780 \\ \underline{-3780} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 756} \\ \underline{-378} \\ 3780 \\ \underline{-3780} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 2746} \\ \underline{-2746} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 3024} \\ \underline{-3024} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 2268} \\ \underline{-2268} \\ 0 \end{array}$$

$$\begin{array}{r} 378 \overline{) 392} \\ \underline{-378} \\ 140 \end{array}$$

$$\begin{array}{r} 378 \overline{) 4158} \\ \underline{-378} \\ 1378 \\ \underline{-1378} \\ 0 \end{array}$$

5
New

$$0.5L \times \frac{1 \text{ gal}}{3.78L} = \frac{0.5 \text{ gal}}{3.78}$$

1	2	3	4	5
378	378	378	378	378
x 1	x 2	x 3	x 4	x 5
756	1134	1512	1890	2268

6	7	8
378	378	378
x 6	x 7	x 8
2268	2646	3024

$$378 \overline{) 50.000000}$$

$$\begin{array}{r} 0.13227 \\ -378 \downarrow \\ 1220 \\ -1134 \downarrow \\ 860 \\ -756 \downarrow \\ 1040 \\ -756 \downarrow \\ 2840 \\ -2646 \downarrow \\ 1940 \\ 1512 \\ 428 \\ 8 \downarrow \\ 1940 \\ -1890 \\ 500 \end{array}$$

There are 0.13228 gal
in 0.5 Liters.

- ⑥ The "industrial strength" cleaner has a higher concentration of the active ingredient ~~than~~ then the "regular strength" cleaner.
- ⑦ The greenhouse effect traps heat from the sun. Without the greenhouse effect it would be too cold to sustain life.
- ⑧ The water will not evaporate when the humidity is 100% because the ~~air~~ air is 100% saturated with water vapor.
- ⑨ When the sweat ~~evapor~~ evaporates it takes energy with it which cools you down.

(10) Nitrogen

(11) We exhale more oxygen.

(12) The air is cleaner today than it was 30 years ago.

(13) Ground-level ozone is poisonous so we want eliminate it, but the ozone in the ozone layer can't harm us because it is so high up.

(14) 31.1 inches of mercury.

(15) The first vial is from the homosphere.

(16) troposphere, stratosphere, and mesosphere.

(17) In the troposphere and mesosphere the temperature decreases with ~~increasing~~ increasing altitude. In the stratosphere the temperature increase with increasing altitude.

(18) Most of earth's weather occurs in the troposphere.

(19) The second sample will have the molecules moving more slowly because it is cooler.

(20) The "ozone hole" is caused by the polar vortex which occurs over the south pole in winter.

(21) The chemical formula for methane is: CH_4 .

(22) There are 24 atoms in one molecule of glucose.

(23) Yes this molecule will be ~~non~~ nonpolar.

(24) Carbon disulfide is made of nonpolar molecules.

(25) ~~Hydrogen bonding~~ Hydrogen bonding is responsible for making water ~~heavier~~ lighter as a solid than a liquid.